查询SD1100供应商

TOPAZ SEMICONDUCTOR

T-29-25

SD1100, SD1101

N-CHANNEL ENHANCEMENT-MODE HIGH-VOLTAGE D-MOS POWER FETS

ORDERING INFORMATION

Sorted Chips In Conductive Waffle Pack	SD1100CHP	SD1101CHP
TO-226AA (TO-92) Package	—	SD1101BD
TO-206AA (TO-18) Package	SD1100DD	SD1101DD
TO-205AF (TO-39) Package	SD1100HD	SD1101HD
Description	450V, 35 ohm	400V, 25 ohm

FEATURES

- Gate Stand-off, ±40V min.
- P-channel complements available, VP0540 series
- Wide variety of Packages

APPLICATIONS

- Motor Controls
- Line Drivers
- Power Supplies

ABSOLUTE MAXIMUM RATINGS (T_C = +25°C unless otherwise noted)

Drain-Source Voltage
- SD1100 ..... 450V
- SD1101 ..... 400V

Drain-Gate Voltage (R_{GS} = 1MΩ)
- SD1100 ..... 450V
- SD1101 ..... 400V

Gate-Source Voltage ..... ±40V

Continuous Drain Current

	T_C = +100°C	T_C = +25°C
SD1100DD	.10A	.17A
SD1100HD	.21A	.33A
SD1101BD	.11A	.18A
SD1101DD	.13A	.21A
SD1101HD	.26A	.41A

Peak Pulsed Drain Current 0.25A

Maximum Power Dissipation

	T_C = +100°C	T_C = +25°C
HD, TO-39 Pkg.	2.75W	6.88W
BD, TO-92 Pkg.	0.5W	1.35W
DD, TO-18 Pkg.	0.7W	1.80W

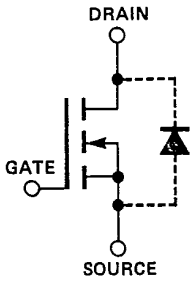
Linear Derating Factor

	Junction to Ambient (mW/°C)	Junction to Ambient (mW/°C)
HD, TO-39 Pkg.	36.6	55
BD, TO-92 Pkg.	6.66	10.8
DD, TO-18 Pkg.	9.33	14.4

Operating Junction and Storage Temperature Range ..... -55°C to +150°C

Lead Temperature (1/6" from mounting surface for 10 Sec) ..... +260°C

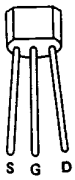
PIN CONFIGURATIONS



TO-205AF (TO-39)

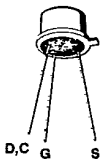
See Package 6

TO-226AA (TO-92)



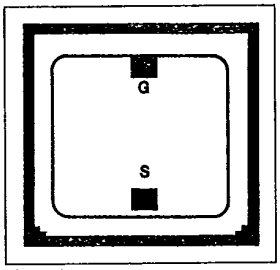
See Package 5

TO-206AA (TO-18)



See Package 1

CHIP CONFIGURATION



Dimensions: .054 × .051 × .020 in.
Drain is backside contact.

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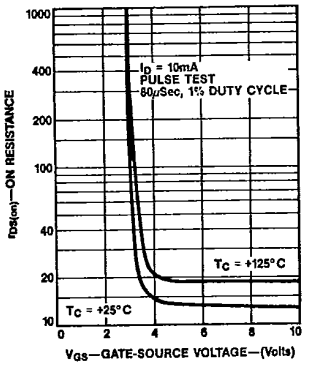
ELECTRICAL CHARACTERISTICS (T_C = +25°C unless otherwise noted)

#		CHARACTERISTIC		SD1100 MIN	SD1100 TYP	SD1100 MAX	SD1101 MIN	SD1101 TYP	SD1101 MAX	UNIT	TEST CONDITIONS	
1		BV_{DSS}	Drain Source Breakdown Voltage	450	475		400	425		V	I_D = 10μA, V_{GS} = 0	
2		I_{GSSF}	Gate Forward Leakage Current		.03	10		.03	10	nA	V_{GS} = 20V	V_{DS} = 0
3		I_{GSSR}	Gate Reverse Leakage Current		-.03	-10		-.03	-10	nA	V_{GS} = -20V	V_{DS} = 0
4		I_{DSS}	Drain-Source OFF Leakage Current		2.0	200				nA	V_{DS} = 360V, V_{GS} = 0	
5						2.0				μA	V_{DS} = 360V, V_{GS} = 0	T_C = +125°C
6								2.0	200	nA	V_{DS} = 320V, V_{GS} = 0	
7									2.0	μA	V_{DS} = 320V, V_{GS} = 0	T_C = +125°C
8		$V_{GS(th)}$	Gate Source Threshold Voltage	1.0	3.0	5.0	1.0	3.0	5.0	V	I_D = 10μA, V_{DS} = V_{GS}	
9		$I_{D(ON)}$	ON Drain Current[1]	250	750		250	750		mA	V_{DS} = 25V, V_{GS} = 10V	
10		$r_{DS(ON)}$	Drain-Source ON Resistance[1]		13	35		13	25	ohms	V_{GS} = 10V, I_D = 10mA	
11					19	60		19	42	ohms	V_{GS} = 10V, I_D = 10mA	T_C = 125°C
12	DYNAMIC	g_{fs}	Forward Transconductance[1]	250	400		250	400			V_{DS} = 25V, I_D = 250mA, f = 1KHz	
17	DYNAMIC	c_{iss}	Common-Source Input Capacitance		80	100		80	100	pF	V_{DS} = 25V, V_{GS} = 0, f = 1MHz	
18	DYNAMIC	c_{rss}	Common-Source Reverse Transfer Capacitance		1.3	2.5		1.3	2.5	pF	V_{DS} = 25V, V_{GS} = 0, f = 1MHz	
19	DYNAMIC	c_{oss}	Common-Source Output Capacitance		10.5	15		10.5	15	pF	V_{DS} = 25V, V_{GS} = 0, f = 1MHz	

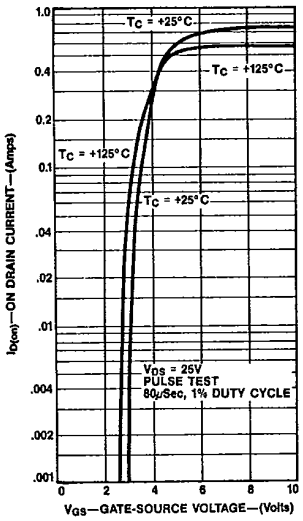
Note 1: Pulse Test 80μSec, 1% Duty Cycle

TYPICAL PERFORMANCE CHARACTERISTICS (T_A = +25°C unless otherwise specified)

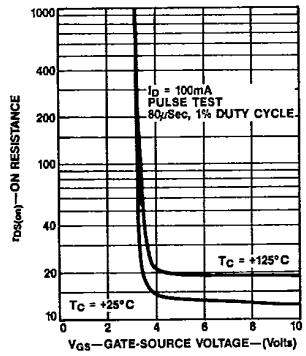
ON RESISTANCE —VS— GATE-SOURCE VOLTAGE



ON DRAIN CURRENT —VS— GATE-SOURCE VOLTAGE



ON RESISTANCE —VS— GATE-SOURCE VOLTAGE



FORWARD TRANSCONDUCTANCE —VS— ON DRAIN CURRENT